

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D. C. 20554

In the Matter of	)	
	)	
Revision of the Commission's Rules to	)	CC Docket No. 94-102
Ensure Compatibility with Enhanced 911	)	
Emergency Calling Systems	)	

To: Chief, Wireless Telecommunications Bureau

**N. E. COLORADO CELLULAR, INC. PETITION FOR WAIVER**  
**OF SECTION 20.18 OF THE RULES**

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## TABLE OF CONTENTS

	<u>Page</u>
SUMMARY .....	ii
I. BACKGROUND AND FACTS .....	1
II. NECCI MEETS THE STANDARD FOR GRANT OF THE REQUEST OF WAIVER .....	6
A. NECCI's Waiver is Specific, Focused and Limited in Scope, With a "Clear Path to Compliance" .....	6
B. NECCI Faces Technological Issues and Other Special Circumstances .....	7
C. NECCI's Proposed Solutions Come as Close as Possible to Meeting the Commission's Phase II Requirements .....	9
D. Grant of the Requested Waiver is in the Public Interest .....	11
III. CONCLUSION .....	13

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## SUMMARY

N. E. Colorado Cellular, Inc. ("NECCI") respectfully requests that the Federal Communications Commission ("Commission") grant its request for waiver of the enhanced 911 ("E911") Phase II deployment provisions in Section 20.18 of the Commission's rules. NECCI, a provider of cellular services in Colorado and Nebraska, has elected to deploy a handset-based solution to provide location information to the public safety answering points ("PSAPs") in the portions of its service territory that are converting to digital, and a network-based solution for its analog areas.

Although NECCI is committed to implementing the necessary handset and network upgrades as quickly as possible, several factors have prevented it from doing so in accordance with the schedule mandated by the Commission's rules. First, as a small carrier serving a primarily rural subscriber base, NECCI faces severe financial and technical constraints on its ability to implement an E911 solution that meets the Commission's Phase II location accuracy requirements. Second, NECCI lacks the bargaining power necessary to ensure that upgraded handsets, cell site hardware, and switch technologies are made available for deployment prior to the Commission's implementation deadlines.

NECCI is committed to the rapid improvement of public safety communications and will continue to work with manufacturers and PSAPs to address the issues described above. In pursuit of this objective, NECCI proposes to implement a handset-based solution according to a timetable that tracks the introduction of digital service to its network. For the areas that remain analog, NECCI proposes to implement the best available network-based solution upon the completion of its scheduled switching platform upgrade in mid-2002.

Petitioner's waiver request is "specific, focused and limited in scope, and with a clear path to compliance," and demonstrates NECCI's commitment to come as close as possible to complying with the Phase II rules. Moreover, grant of the requested waiver will serve the public interest. Accordingly, the Commission should grant NECCI's request.

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N.E. Colorado Cellular ("NECCI"), by its attorneys and pursuant to Section 1.925 of the Commission's rules, hereby requests a waiver of the enhanced 911 ("E911") Phase II location accuracy provisions in Section 20.18 of the Commission's rules.<sup>1/</sup> As set forth below, NECCI is unable to ensure the deployment of a Phase II solution in accordance with the Commission's Phase II implementation schedule. NECCI therefore proposes a modified schedule that will permit the deployment of both a handset-based solution and a network-based solution. Because it is narrowly focused with a clear path to compliance, NECCI's request is consistent with the Commission's goals in this E911 proceeding and is in the public interest.

#### **I. BACKGROUND AND FACTS**

NECCI provides commercial mobile radio service ("CMRS") in Colorado RSA 2, Market No. 349A (Logan), Colorado RSA 5, Market No. 352A (Elbert), Nebraska RSA 2, Market No. 534A (Cherry) and Nebraska RSA 4, Market No. 536A (Grant). The company is licensed by the Federal Communications Commission ("FCC") under call signs KNKN327, KNKR307, WPON203, and WPON202. Starting more than 10 years ago, NECCI introduced cellular service to the entirely rural regions that comprise its service territory. Since then, NECCI has built up its analog cellular network

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<sup>1/</sup> Pursuant to Section 20.18 of the Commission's E911 rules, carriers selecting a network solution must begin providing location information to at least 50% of their coverage area or population beginning October 1, 2001, or within 6 months of a valid PSAP request, and to 100% by October 1, 2002 or within 18 months of a request. Carriers selecting a handset or hybrid solution must begin selling and activating location-capable handsets by October 1, 2001, regardless of whether a valid PSAP request has been received. The rules further require such carriers to ensure that at least 25% of new handset activations be location capable by December 31, 2001; that 50% of handset activations be location-capable by June 30, 2002; that 100% of new digital handset activations be location-capable by December 31, 2002; and that 95% penetration of location-capable handsets be achieved by December 31, 2005. Following its grant of conditional waivers to the nation's largest wireless carriers, the Commission recently granted an extension of time until November 30, 2001 for remaining carriers to file petitions for waiver or to achieve compliance with Phase II rules. See "Commission Establishes Schedule for E911 Phase II Requests by Small and Mid-sized Wireless Carriers," Public Notice, FCC 01-302 (rel. Oct. 12, 2001).

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to a total of 65 cell sites serving approximately 21,000 subscribers.

NECCI is deeply committed to serving the emergency communications needs of the populations served by its network. In an effort to meet the Commission's Phase II E911 requirements, NECCI has worked steadily with public safety answering points ("PSAPs") to achieve the mutual ability to provide and process E911 location data. To date, none of the nine PSAPs in NECCI's service area has requested Phase II service, and only one has indicated that it has Phase II capability.

In addition, NECCI has held numerous discussions with handset and network equipment vendors for the purpose of identifying an optimal Phase II solution and developing an implementation plan. In its November 2000 E911 implementation report, NECCI indicated its tentative selection of a network-based solution to be provided by Motorola. In light of the prohibitive cost of that solution, however, the report also indicated that NECCI was actively exploring other alternatives for both handset- and network-based Phase II solutions that might be more cost-effective and thus more quickly achievable. Since the filing of that report, NECCI has continued to work with equipment providers to determine the feasibility and effectiveness of each type of solution.

Despite its best efforts to implement a Phase II solution in accordance with the Commission's schedule, NECCI has been unable to do so for reasons beyond its control. Because of the remoteness and low population density of its markets, NECCI faces severe financial and technical constraints on its ability to implement an E911 solution that meets the Commission's Phase II location capability requirements. As explained below, a network-based solution in full compliance with the Phase II accuracy requirements would be prohibitively expensive to implement by the dates provided under the Phase II rules. A handset-based solution will likely provide superior accuracy, but the handset and mobile switching office ("MSO") technology upgrades will not be commercially available by

the Commission's deadline.<sup>2/</sup> Even assuming some manufacturers make such handsets "generally available" before November 30, 2001, NECCI lacks the size and resources to negotiate the necessary upgrades and consistently finds itself at the end of the line for delivery. Additionally, a handset solution will require NECCI to upgrade the corresponding portions of its network to digital service, thereby adding even further costs on top of the expense of introducing upgraded handsets.

The nation's largest wireless carriers recently persuaded the Commission of the need for a relaxation of the Phase II implementation requirements, resulting in grants of additional time for deployment of handset- and network-based solutions.<sup>3/</sup> Although their requests identified some of the same obstacles NECCI faces, those carriers have exponentially greater financial resources than NECCI and serve at least some urban populations providing larger revenue streams to absorb the costs of implementation. Moreover, all of those carriers operate at least partially digital networks, facilitating the introduction of some handset-based Phase II technologies. By contrast, NECCI operates an entirely analog network and will only gradually phase in digital service beginning in mid-2003.

NECCI also is aware of the large number of petitions for waiver that are currently before the Commission in this proceeding. Many of them were filed by companies that, like NECCI, are

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<sup>2/</sup> See, e.g., Western Wireless Corporation Petition for Waiver of Section 20.18(g) at 11 (Aug. 31, 2001) ("Western Wireless Petition"); Leap Wireless International, Inc. Petition for Partial Waiver of E-911 Phase II Implementation Milestones at 13-16 (Aug. 23, 2001) ("Leap Wireless Petition"); Comments of AT&T Wireless Services, Inc. at 6 (Aug. 20, 2001) (filed in support of Sprint PCS petition for waiver); Inland Cellular Telephone Co. Petition for Limited Waiver of Sections 20.18(e) and (g) of the Rules at 3 (July 30, 2001) ("Inland Petition"); Qwest Wireless, LLC and TW Wireless, LLC's Petition for Extension of Time or Waiver of Section 20.18 of the Rules at 8 (July 25, 2001) ("Qwest Petition").

<sup>3/</sup> See "FCC Acts On Wireless Carrier and Public Safety Requests Regarding Enhanced Wireless 911 Services," News Release (Oct. 5, 2001).

primarily rural carriers without the financial resources or leverage of the national service providers. While larger carriers may have the financial wherewithal to absorb the costs of Phase II or may be able to prorate them among large numbers of subscribers, NECCI is confronted by the prospect of disproportionately large Phase II upgrade costs compared to the company's historical and projected annual revenues and a modest subscriber base through which to recover them.

NECCI believes that its particular circumstances warrant an additional relaxation of the deadlines to allow NECCI to implement Phase II using both a handset- and a network-based solution. Thus, NECCI requests that the Commission consider it to be in compliance with Section 20.18 if it implements a handset-based solution for the portions of its network that are scheduled to be upgraded to digital, and the best available network-based solution for the analog portions of its network. For the areas planned for conversion to digital, NECCI proposes to implement its handset-based Phase II solution according to the following modified timetable: (i) begin sale and activation of location-capable handsets by October 1, 2003; (ii) ensure location capability of 25% of digital handsets sold by December 31, 2003; (iii) achieve 50% benchmark by December 31, 2004; (iv) achieve 100% benchmark by December 31, 2005; and (v) achieve 95% total penetration benchmark for customers served by NECCI's digital network by December 31, 2006. For its analog areas, NECCI proposes to implement a network-based solution as follows: (i) order and install the necessary switch-related infrastructure for a network-based solution no later than July 31, 2002; (ii) provide E911 location service to the top 35% of the cell sites of any requesting PSAP's jurisdiction<sup>4/</sup> within 9 months of receiving a request; (iii) provide service to the top 50% of the cell sites within 12 months of a request;

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<sup>4/</sup> For the purpose of this request, the top 35%, 50% and 75% cell sites are determined by the level of demand for 911 service in particular areas.

and (iv) provide service to the top 75% of the cell sites within 18 months of a request. For its handset-based solution, NECCI does not seek relief from the Commission's accuracy standard. However, for its network-based solution, NECCI proposes an accuracy standard of 1,000 meters or better 67 percent of the time.

Because NECCI's request is "specific, focused, and limited in scope, and with a clear path to compliance," waiver of the Commission's November 30, 2001 deadline is warranted.<sup>5/</sup> Moreover, because of the lack of Phase II readiness on the part of the PSAPs in NECCI's service area, strict enforcement of the Phase II compliance dates would not serve the purpose of the E911 rules. Additionally, a handset solution, which is planned for the areas of NECCI's network that are migrating to digital service, would likely enable customers to benefit from a superior degree of location precision as location-capable handsets are put into use.<sup>6/</sup> Finally, permitting NECCI to proceed with Phase II implementation pursuant to the timetables proposed herein would be consistent with NECCI's planned upgrades, thereby allowing NECCI to continue to provide service to its subscribers without the need for substantial rate increases. Accordingly, the requested waiver is in the public interest and should be granted.

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<sup>5/</sup> Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Fourth Memorandum Opinion and Order, 15 FCC Rcd 17442, 17457-58 (2000) ("Fourth MO&O").

<sup>6/</sup> See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Third Report and Order, 14 FCC Rcd 17388, 17403 (1999) ("Third Report and Order"); ALLTEL Petition at 30.

## II. NECCI MEETS THE STANDARD FOR GRANT OF THE REQUESTED WAIVER

Generally, the Commission's rules may be waived when there is good cause shown<sup>7/</sup> and when "special circumstances warrant a deviation from the general rule, and such a deviation will serve the public interest."<sup>8/</sup> In the context of E911, the Commission has recognized that individual waivers that are "specific, focused and limited in scope, and with a clear path to compliance" may be granted where, due to "technology-related issues" or "exceptional circumstances," a wireless carrier is unable to meet the October 1, 2001 deadline.<sup>9/</sup> Additionally, the Commission has recently stated that carriers should state how and when they will comply with the Phase II rules, and that carriers should demonstrate that their proposed solutions will come as close as possible to meeting the accuracy, reliability, and timeliness requirements.<sup>10/</sup> As explained below, NECCI's request satisfies the Commission's standard for a Phase II waiver.

### A. NECCI's Waiver Is Specific, Focused and Limited in Scope, With a "Clear Path to Compliance."

NECCI seeks only as much relief as is necessary to enable it to achieve Phase II location capability as quickly as its circumstances will allow. Rather than request a "broad, generalized

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<sup>7/</sup> 47 C.F.R. § 1.3.

<sup>8/</sup> Fourth MO&O at 17457; Northeast Cellular Telephone Co. v. FCC, 897 F.2d 1164, 1166 (D.C. Cir. 1990) citing WAIT Radio v. FCC, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

<sup>9/</sup> Fourth MO&O at 17457-58.

<sup>10/</sup> See "Wireless Telecommunications Bureau Provides Guidance on Filings by Small and Mid-Sized Carriers Seeking Relief From Wireless E911 Automatic Location Identification Rules," Public Notice, DA 01-2459 (rel. Oct. 19, 2001).

waiver”<sup>11/</sup> or an indefinite extension, NECCI has formulated a proposed set of deadlines that constitutes the best implementation timeline possible under the circumstances. Specifically, NECCI has proposed two detailed timetables that represent firm commitments to implement both a handset- and a network-based Phase II solution, each with a set of readily measurable benchmarks. Each timetable is based on information obtained during NECCI’s diligent pursuit of several different types of Phase II solutions. By proposing these implementation schedules, NECCI promises to make every effort to meet specific targets and to come as close as possible to achieving compliance with the Phase II rules.

**B. NECCI Faces Technological Issues and Other Special Circumstances.**

Despite its efforts to comply with the Commission’s E911 requirements in a timely fashion, NECCI has faced technological issues and other special circumstances that have hindered its progress.

*1. NECCI Lacks the Power to Negotiate Technology Upgrades.*

First, NECCI has been unable to obtain vendor commitments that would allow it to begin selling location-capable handsets or to make necessary network upgrades by the dates specified in the Phase II rules. As a small carrier with a primarily rural subscriber base, NECCI is not able to negotiate accelerated General Availability (“GA”) dates for new types of equipment. As Inland Cellular Telephone Co. stated recently in its Phase II waiver request:

Smaller carriers in smaller markets are at the ‘end of the line’ for product distribution. It is accepted industry practice that GA dates are availability dates for large market carriers only and that small carriers can expect significant delays.<sup>12/</sup>

Thus, NECCI lacks the ability that larger carriers with regional or nationwide footprints might have

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<sup>11/</sup> See id.

<sup>12/</sup> Id. at 6.

to demand that manufacturers provide it with the requisite location technology.<sup>13/</sup> As a result, the necessary handset and network upgrades remain unavailable to NECCI despite its aggressive pursuit of discussions with manufacturers.

2. *A Network- or Handset-based Solution Would Be Prohibitively Expensive to Implement By the Commission-Mandated Deadlines.*

From its research into the costs involved in the upgrades necessary for a network- or handset-based solution, NECCI has learned that it would be impossible to absorb or pass along those costs in the short term. As an initial matter, a network-based solution will not be possible until NECCI upgrades its switching platform to Rev D, at a cost of \$1.4 million. From its discussion with network solution providers, NECCI estimates that a network-based solution would cost approximately \$25,000 per cell site. Multiplied by 65 cell sites, this would amount to more than \$1.6 million. However, because of the difficulty of achieving the necessary triangulation with the widely dispersed cell sites in the entirely rural areas served by NECCI,<sup>14/</sup> it will be necessary to equip many additional sites and to lease other (non-cellular) towers at a cost of \$10,000 per site. This would likely drive up the cost of a network solution past \$2 million, on top of the \$1.4 million Rev D upgrade already planned.

A handset solution is likely to provide greater accuracy, but at an even greater cost. From its discussions with Motorola, its handset provider, NECCI has learned that a Phase II handset

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<sup>13/</sup> See Corr Wireless's Consolidated Reply Comments Regarding Its Request for Waiver, CC Docket No. 94-102 at 3-4 (Aug. 6, 2001); Reply Comments of D&E/Omnipoint Wireless Joint Venture, L.P. d/b/a PCS One E-911 Phase II Location Technology Implementation Rules, CC Docket No. 94-102 at 3 (Aug. 6, 2001).

<sup>14/</sup> The triangulation necessary to produce location capability flows naturally from the network design of an urban area without the need for new cell sites or equipment specifically added for E911 purposes. On the other hand, as the Commission has observed, rural systems like NECCI's tend to be designed to cover strings of highways rather than circles of densely populated areas. See Third Report and Order, 14 FCC Rcd at 17400.

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solution would require NECCI to transition its network to digital in addition to introducing upgraded handsets into its customer base. The transition to digital will cost approximately \$5 million, and the additional cost of the handsets has not yet been specified by Motorola.

Those expenditures are prohibitively large, particularly when contrasted with NECCI's historical and projected revenues, which are an order of magnitude lower than those of the carriers that recently were granted waivers of the Phase II requirements. Additionally, NECCI's roaming revenue – which currently comprises over 50% of its total revenues – is expected to decline significantly over the next several years as NECCI's roaming partners continue to grow their customer base and networks in NECCI's area.

Given the highly competitive nature of the CMRS industry, it would be impossible for NECCI to raise its rates sufficiently to cover the increase in its costs entailed by a Phase II solution, even if one were immediately available. Cellular service is highly elastic with little customer loyalty; thus, a small price increase can significantly degrade the subscriber base. For this reason, a small, rural carrier like NECCI finds itself at a severe disadvantage compared to the national wireless carriers, who can spread and recover costs over millions of customers.

**C. NECCI's Proposed Solutions Come as Close as Possible to Meeting the Commission's Phase II Requirements.**

Both the handset- and network-based solutions proposed herein represent the best available solutions enabling NECCI to come as close as possible to satisfying the accuracy, reliability, and timeliness requirements of the Phase II rules. Because the handset-based solution requires an upgrade to digital service, NECCI's efforts to implement these solutions are constrained by its ability to make the corresponding upgrades. As a product of discussions with its switch manufacturer, NECCI has

determined that the earliest date on which it can begin upgrading to digital service is the third quarter of 2003. An additional group of sites is expected to be upgraded to digital by the third quarter of 2004. The initial upgrades are likely to be in high-traffic areas with relatively denser populations, where E911 location service will be most critical.

NECCI does not have the financial resources to upgrade all of its sites to digital in the foreseeable future. For those areas that remain analog, NECCI proposes to implement the best available network solution in as short a time as practicable. As explained above, a network-based solution cannot be implemented until NECCI upgrades its switching platform to Rev D, an upgrade that is currently planned for July 2002. Soon thereafter, NECCI expects to order, install, and begin testing the necessary cell site hardware to support a network solution. These cell site modifications will be made with priority given to areas where PSAPs have made valid Phase II requests or where such a request is likeliest to arise in the near future.

The accuracy standards proposed herein also demonstrate NECCI's commitment to implementing the best available Phase II solution. First, NECCI does not seek relief from the Commission's accuracy requirement for its handset solution. This will allow NECCI's digital customers with location-capable handsets to benefit from superior location accuracy. Second, NECCI's proposed accuracy standard for its network solution is in keeping with the Commission's "best practices" approach to carriers' E911 solutions.<sup>15/</sup> Grant of this accuracy standard would also be consistent with previous grants of Phase II waiver requests by much larger, nationwide wireless carriers. Specifically, NECCI's proposed combination of a handset solution and a network solution

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<sup>15/</sup> See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Request for Waiver by Verizon Wireless, Order at ¶ 29 (rel. Oct. 12, 2001).

is analogous to VoiceStream's waiver request, which the Commission granted in September 2000.<sup>16/</sup> Under the terms of that waiver grant, VoiceStream's E-OTD solution will be expected to adhere to the Commission's handset accuracy requirements.<sup>17/</sup> With respect to the NSS "safety net" system, however, the accuracy standard was relaxed to 1000 meters or better for 67 percent of calls.<sup>18/</sup> As explained above, the cell site configuration of a rural cellular system seriously complicates the process of providing high levels of accuracy by means of a network-based solution. Accordingly, consistent with its previous waiver grants, the Commission should recognize NECCI's need for a modified accuracy standard for its network solution, one which will provide improved location accuracy for its analog customers with minimal delay.

**D. Grant of the Requested Waiver Is in the Public Interest.**

The public policy behind the Commission's E911 rules is to meet important public safety needs as quickly as reasonably possible.<sup>19/</sup> Allowing NECCI to introduce a network capability and location-capable handsets on a more graduated schedule would serve this objective. First, the extension in time would allow NECCI to take advantage of decreased upgrade costs as competing Phase II technologies become more widely available. Without the need to absorb or pass along the currently prohibitive costs, NECCI will have a greater chance of retaining its ability to provide service to its subscribers at competitive prices. Second, as the Commission has recognized, handset-based

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<sup>16/</sup> See Fourth MO&O, 155 FCC Rcd at 17461-64.

<sup>17/</sup> See id.

<sup>18/</sup> See id.

<sup>19/</sup> See id. at 17449.

solutions generally provide superior accuracy levels.<sup>20/</sup>

In addition to making it possible for NECCI to provide superior location accuracy, the proposed implementation schedule would have no appreciable effect on the availability of Phase II E911 in NECCI's service area. With only one exception, the PSAPs in NECCI's markets do not have the technical capability for receiving and using Phase II location information. The slight chance of a valid Phase II request being made in the near future would scarcely justify the prohibitive cost of forcing a Phase II solution in advance of NECCI's scheduled switch upgrades. Accordingly, the public interest would not be harmed by the requested deferral of the Commission's deadline.

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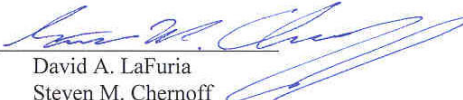
<sup>20/</sup> See Third Report and Order, 14 FCC Rcd at 17403 ("Moreover, to the extent that a phase-in might delay [automatic location identification] implementation, handset-based solutions may well generate offsetting benefits. For example, it appears that handset-based solutions may achieve greater accuracy.")

### III. CONCLUSION

For the reasons set forth above, NECCI requests a waiver of Section 20.18 of the rules. The Commission may contact Larry R. Aisenbrey, N.E. Colorado Cellular, Inc., 1224 West Platte, Fort Morgan, Colorado 80701; Phone: 970-542-3601; FAX: 970-867-3589; e-mail: [larrya@necci.com](mailto:larrya@necci.com) with any questions regarding this request. Please direct a copy of any written communications to undersigned counsel directly.

Respectfully submitted,

**N. E. COLORADO CELLULAR, INC.**

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